

February 9, 2004

To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject:

Serial No. 10/718,865 11/21/03

Simon Chooi et al.

A METHOD TO CREATE A COPPER
DIFFUSION DETERRENT INTERFACE

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO-1449, Information Disclosure Citation
In An Application.

The following Patents and/or Publications are submitted to
comply with the duty of disclosure under CFR 1.97-1.99 and
37 CFR 1.56.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being
deposited with the United States Postal Service as first class
mail in an envelope addressed to: Commissioner for Patents,
P.O. Box 1450, Alexandria, VA 22313-1450, on February 17, 2004.

Stephen B. Ackerman, Reg.# 37761

Signature/Date Stephen B. Ackerman 2/17/04

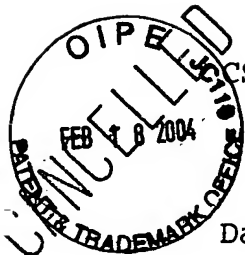
U.S. Patent 5,933,758 to Jain, "Method for Preventing Electroplating of Copper on an Exposed Surface at the Edge Exclusion of a Semiconductor Wafer", teaches a barrier layer over a dual damascene opening.

U.S. Patent 5,693,563 to Teong, "Etch Stop for Copper Damascene Process", discusses dual barrier layers in a dual damascene process.

U.S. Patent 5,451,542 to Ashby, "Surface Passivation Process of Compound Semiconductor Material Using UV Photosulfidation", teaches an S surface passivation process.

The following two U.S. Patents teach the use of a copper sulfide on copper wiring:

- 1) U.S. Patent 5,953,628 to Kawaguchi, "Method for Forming Wiring for a Semiconductor Device".
- 2) U.S. Patent 5,863,834 to Kawaguchi et al., "Semiconductor Device and Method of Manufacturing the Same."



CS-99-332B



U.S. Patent 6,040,243 to Li et al., "Method to Form Copper Damascene Interconnects Using a Reverse Barrier Metal Scheme to Eliminate Copper Diffusion," discloses a method of fabricating damascene vias.

U.S. Patent 6,335,570 to Mori et al., "Semiconductor Device and Manufacturing Method Thereof," discloses a semiconductor device capable of preventing diffusion of a particle of copper or the like which forms a conductive layer without any increase in the number of manufacturing steps.

Sincerely,

Stephen B. Ackerman,
Reg. No. 37761

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION <i>(Use several sheets if necessary)</i>	Document Number (Specimen) CS-99-332B	Application Number 10/718,865
	Applicant Simon Chooi et al.	
	Filing Date 11/21/03	Group Art Unit

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILED DATE IF APPROPRIATE
	5933758	8/3/99	Jain	438	687	5/12/97
	5693563	12/2/97	Teang	437	190	7/15/96
	5451542	9/19/95	Ashby	437	173	6/21/94
	5953628	9/14/99	Kawaguchi	438	635	1/27/98
	5863834	1/26/99	Kawaguchi et al.	438	625	3/4/97
	6040243	3/21/00	Li et al.	438	687	9/20/99
	6335570	1/1/02	Mori et al.	257	751	4/20/99

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
					YES	NO

OTHER DOCUMENTS *(Including Author, Title, Date, Part/next Pages, Etc.)*

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



CS-99-332B



February 9, 2004

To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Fr: George O. Saile, Reg. No. 19,572
28 Davis Avenue
Poughkeepsie, N.Y. 12603

Subject: | Serial No. 10/718,865 11/21/03 |

Simon Chooi et al.

A METHOD TO CREATE A COPPER
DIFFUSION DETERRENT INTERFACE

ASSOCIATE POWER OF ATTORNEY

I hereby appoint Cheryl R. Figlin, registration number 39,562, as my associate attorney in this case. Her telephone number is (610) 821-0414.

Please continue to direct all correspondence in this case to the undersigned attorney.

Respectfully submitted,

Stephen B. Ackerman,

Principal attorney of record